

If the "Society for Propagating the Gospel, &c.," be the successor of "The United Brethren," we should be formally and legally notified to that effect, and likewise the resolution of request should be under seal. If we were to accede to this demand without a greater knowledge of the circumstances we might be liable to a demand from the real owner of these MSS. with which the Society could not comply. We, therefore, recommend that the Society adopts the following resolution :

That Bishop Schweinitz be requested to inform the Society by what right the "Society for Propagating, &c.," demand from us these MSS. deposited by "The United Brethren."

PHILLIPS,
GEO. H. HORN, } *Curators.*

Nov. 2, 1883.

Notes of Reference Appended.

Deposited, 1819. Trans. Vol. I, page
1865. Dec. 1. (Proc. Vol. X, p. 187.) D. W. Fiske writes in relation to the Zeisberger MSS.

Dec. 15. (Proc. Vol. X, p. 193.) Letters read in reference thereto. Contents not given.

Literary Committee made a recommendation which was referred to the Secretaries to report on.

1866. Feb. 16. Vol. X, p. 205. The Secretaries reported they had found these MSS. noted as deposited, &c. The United Brethren were requested to allow the American Philosophical Society to publish them.

March 2. (Vol. X, p. 207.) Mr. Fraley states that the United Brethren desired themselves to publish these MSS.

March 16. A letter from Bethlehem *in ea re* read.

The matter ended there, and nothing further appears on the minutes to this day.

PHILLIPS,
GEO. H. HORN, } *Curators.*

Nov. 2, 1883.

Letter of Leo Lesquereux.

Oswald Heer, the celebrated Professor of Zurich, was born at Glaris in 1809. His father was a doctor. He first studied theology, and was ordained as minister, but afterwards studied medicine, and became interested in the science of Natural History. He has lived at Zurich since 1832. In 1837 he was Professor either at the University or at the Polytechnic School, and Director of the Botanical Garden. He was for a few years a member of the Council of Zurich, but resigned his seat to be able to attend entirely to his studies. In 1869 Zurich received the celebrated scientist as an honorary citizen (member of the city Bourgeoisie).

The letter of communication of the family, 29th September, says only

this: "Prof. Dr. Oswald Heer was called to God at the age of 74 years, 27 days, after a short illness. He died at Lausanne on the 27th." Berthoud, who writes me also on the 29th, gives me a few details on Heer's last days. He says: "I come to be with you to deplore the loss of your friend and to share your sorrow. Heer is dead. He was of late very tired. In order to get some rest he went to Montreux, that fine warm place on the borders of the Lake of Geneva, where he expected to regain some strength for new works. There he had after a few days an attack of bronchitis. Well knowing the danger of that disease for a man advanced in years, he hurried to his brother at Lausanne, where he died the day after his arrival."

Heer had worked the whole winter beyond human forces, to bring to a close the seventh volume of his *Arctic Flora* which came out in July. The great Swiss exposition of industrial products, held at Zurich, gave him constant occupation and some excitement by the numerous visits he received. The meeting of the Society of Natural History of Switzerland of which he was President was also held at Zurich, increasing his work of course, and forcing him to long and severe exertion. In his last letter, end of August, he writes me that his task is nearly finished, and that he feels that it is time to close his work.

A Swiss journal announcing the death of Prof. Heer says, that the loss is irreparable, and this expression is echoed by many. The loss of a member of our poor humanity is never irreparable; that of Heer has left a vacant place which will be unoccupied for a long time to come. Why? Allow me to trace a short outline of his career as the more fitting answer to the question.

I know little of the early years of the celebrated Professor of Zurich. His family came from St. Gall. He studied first theology in Zurich. I believe. But then, prompted by his ardent love of nature, he abandoned his calling for the study of entomology and botany. From the beginning of his career, he took a high standing in the world of science by the publication of a memoir on the relation of the insects with the plants, enumerating and describing a large number of species of plants with the insects related to each by their habitat, their food, their mode of life, etc. He had already given his attention to fossil botany, when, in 1848, he began to collect materials for the preparation of a fossil flora of Switzerland and the adjoining countries. He went to work, helped by most favorable circumstances; by the rich collections of the Museum of Zurich; by the communications of numerous friends, among them the celebrated Alex. Braun, later Professor of Botany at the University of Berlin, and Director of the Botanical Garden; especially by the resources of a rich lady, Mrs. von Bumine. This lady, endowed with a great love of science and of admiration for the works of Heer, who was already a professor of reputation, opened upon her property near Lausanne quarries and tunnels for the discovery and collection of fossil plants, materials which were sent to Zurich by tons to be studied by Heer. A large part of the specimens figured in

the *Flora tertiaria Helvetica* came from that source. One cannot read without a deep feeling of admiration a note of thanks written by Heer in honor of that lady in the beginning of the third volume of that work. The third volume ends the Tertiary Flora of Switzerland. The work was then supposed to be complete, but a fourth volume, *Flora fossilis Helvetica* was published in 1876, containing descriptions and figures of plants of the Carboniferous, the Trias, the Jurassic, the Cretaceous and of the Eocene of Switzerland. This great work in 4to, with a very large number of splendid plates, is too well known to demand description. It has given to the author the first place in the ranks of Phytopaleontologists of our time.

A kind of antecedent résumé of this work was already published in 1865 under the name of *Die Urwelt der Schweiz* (the Ancient World of Switzerland). It is a large F^o volume of 600 pages, splendidly illustrated by figures representing fossil remains of plants and animals of the different geological periods. The best proof of the worth of the volume is the fact that though relating only to the paleontology of the geological formations of Switzerland, the book has had already three or four editions, and been translated into six different languages.

At this time Heer was requested by professors and directors of museums to determine and describe numerous collections of fossil plants, and as a result of his researches published many separate memoirs on the plants of divers localities of Europe. Among the more important ones I may mention : The Flora of the clays of Borey Tracy, England (1861). The Baltic Miocene flora ; the Eocene flora of Bornstaedt (1863 and 1869). The Cretaceous flora of Moletin ; that of Quedlinburg (1871). The Phyllites cretaciés of Nebraska, the Fossil flora of Alaska, the fossil plants of Vancouver, contributions to the fossil flora of Sumatra, and a number of others, half a dozen of which are mentioned in the catalogue of Heer's work by Schimper.

During this time Heer was already at work on his most important production, the *Flora fossilis Arctica*, which, begun in 1862, was finished by the publication of the seventh volume a few months before his death.

Considering only the large number of the publications of Heer, they already constitute a weighty monument as the result of the life of a man. But that number is not the essential value. Other paleontologists, Brongniart, Sternberg, Unger, Goeppert, Schimper, Lindley and Hutton, among the illustrious dead, have left works which may be compared to those of Heer, though in a far reduced degree of value. None of them, however, has raised fossil botany to a high degree of importance in the scientific world. None of them has, like Heer, opened new fields for the exercise of the mind, and prepared for vegetable paleontology an honorable place in the domain of science enlarged by researches in that specialty.

In the Arctic Flora Heer has brought to light, for the polar regions of Greenland, Spitzberg, Sachalin, a subtropical vegetation, attesting, during the Tertiary period for those northern regions, a climate about like that of Florida and the Gulf shores at the present time. He has recog-

nized an analogous kind of vegetation in following the data furnished by remains of fossil plants southward to the shores of the Baltic sea, and even to those of the Mediterranean in Italy. This fact of course concerning the distribution of plants during the Miocene or Tertiary period has forcibly modified the views formerly admitted respecting the physical circumstances which have governed the earth during geological times, and has compelled physicists and geologists to renew their researches for the solution of important problems concerning the distribution and the cause of heat, and changes in the temperature of the globe. Heer has described also a Cretaceous flora from Greenland bearing evident relation to that of the same period observed in North America and in Europe; a flora representing a number of types which, persisting through the floras of the more recent formations, are still present in the North American vegetation of the present epoch. He has thus evidenced by his Arctic flora the gradual development of vegetable types since the times when the first traces of dicotyledonous plants are recognizable. He has compelled the admission of vegetable paleontology into the domain of geology by the manifest determination of the age of any formation from the characters of its plants only. With only one mistake on that subject has he been unjustly reproached, viz., his reference to the Tertiary of three or four Cretaceous leaves of which he had merely poor sketches to base his determination on.

The noble character of Heer has greatly contributed to give to his works a degree of authority superior to that acquired by any paleontologist before him. Simple, modest in the highest degree, of a serious though contemplative mind, his life was resumed on the fulfillment of the duty of every day. When the University of Switzerland was established at Zurich, he had been named Professor of Natural History and Director of the Museum. His lectures at the University were always followed by a large number of students; so full of interest were they that even strangers and common town-people requested the privilege of attending them. He never missed an opportunity to show his deep interest in the scientific and moral progress of the students. Even in his days of sickness (for all his life he has had to fight against attacks of severe illness), he gave his lessons in his own room, lecturing from his bed. He had been called once by his countrymen to a highly honorable position as a member of the Council of State; but he found that the new duty required too much of his time, and he gave in his resignation in order to continue without hindrance his scientific pursuits.

What can I say more of the friend with whom I have been in intimate relationship long years. Heer united in himself a powerful intellect, trained by severe studies, with the simplicity of a child and the conscience of a true Christian. His works are the expression of the principles of his life.

L. LESQUEREUX.